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ONTARIO MINISTRY OF ENVIRONMENT



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MINISTRY OF THE
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Ontario

Ministry
of the
Environment

The Honourable
William G. Newman,
Minister

Everett Biggs,
Deputy Minister

MINISTRY OF THE ENVIRONMENT

TRAINING PROGRAM

1975-1976

Preface

The Training, Certification and Safety Section, Technical Services Branch, Ontario Ministry of the Environment, is responsible for developing and conducting training and certification programs for personnel engaged in the protection and upgrading of the natural environment. By working in close co-operation with professional, industrial and government organizations, programs are designed to meet the needs of the field staff. As additional requirements are identified, new programs will be developed.

Information not included in the brochure may be obtained from:

Registration Secretary
Training, Certification & Safety
Technical Services Branch
135 St. Clair Avenue West
TORONTO, M4V 1P5

Telephone (416) 965-6994
or
Telecopier



Environment Ontario

Laboratory Library
125 Resources Rd.
Etobicoke, Ontario M9P 3V6
Canada

TRAINING PHILOSOPHY

1. In general, programs employ the Behavioral Objective Approach to Training (BOAT). Each topic has laid-down objectives, which tell the trainee what he will have to know and do in order to successfully complete the course. At the same time they tell the instructor what he must teach, describe or demonstrate so that the trainee will reach his goal. The method ensures that on completion of the learning period the performance of the trainee meets the required standards.
2. To verify successful completion, tests are given under conditions as near as possible to on-the-job working conditions. If "hands-on" performance is required, the trainee will be tested accordingly.

SCOPE OF PROGRAM

3. Courses, workshops and seminars are offered annually, with most being scheduled between September and May. A course consists of lecture and discussion periods interspersed with audio-visual presentations and other demonstrations. A workshop is a course which includes substantial "hands-on" participation, during which the trainee receives practical training and errors are corrected as they occur. Seminars feature the presentation and discussion of papers on various aspects of a subject. Instructors and lecturers are personnel selected for their expertise in one or more course topics.
4. Training programs offered for the period of April 1975 to May 1976 are described in the attached Appendices and are listed below:

- Appendix
1. Basic Sewage Treatment Operation Course
 2. Basic Water Treatment Operation Course
 3. Basic Water/Sewage Treatment Operation Course
 4. Activated Sludge Workshop

5. Basic Gas Chlorination Workshop
6. Surface Water Treatment Workshop
7. Maintenance Gas Fitters Certificate Course
8. Primary Treatment and Digestion Workshop
9. Preventive Maintenance Workshop
10. Private Sewage Systems Course
11. Soils Course
12. Industrial Abatement Course
13. Visible Emissions Identification Course
14. Acoustics Technology
15. Control of Liquid Industrial Wastes in Municipalities
16. Safety Workshop
17. Sewer and Watermain Design Course
18. Sewer and Watermain Construction Inspectors Course Level I
19. Sewer and Watermain Construction Inspectors Course Level II
20. Pumping Operations Workshop
21. Environmental Considerations in Project Planning Course
22. Waste Disposal Site Seminar
23. Contingency Planning Seminar
24. Ice Shelter Inspection Seminar
25. Boating and Marina Inspection Seminar.

5. The program schedule is shown at Appendix 26 and a course calendar at Appendix 27.

6. Prerequisites

- (a) *Certain courses, because of prerequisites and/or course design, are restricted to specific groups. Courses annotated "MOE only" are available to Ministry staff other than plant operators; "Operators only" restricts these courses to water and wastewater treatment plant operators, either Ministry or non-Ministry; "Non-MOE" restricts the course to non-Ministry personnel. If no restriction is shown, anyone with the proper prerequisites may make application.*

- (b) Where prerequisites have been specified for a course, employers must ensure that these are considered in the selection of course candidates. If a candidate lacking the prerequisites arrives to attend a course, he may not be accepted.

7. Course Capacity

The capacity of each course, workshop and seminar is shown on the program schedule. If a course is over-subscribed, selection of candidates will be made by the Section and employers advised (see Para 16 below).

APPLICATION PROCEDURES

- 8. An application to attend a course conducted by the Ministry must be submitted by letter:
 - (a) For a Ministry employee, from a Regional Director, a Regional Manager, or a Branch Director.
 - (b) For a non-Ministry employee, from the individual's employer.
- 9. The following information will be included:
 - (a) Course and date. An acceptable alternate, if available, should be shown.
 - (b) Full name of applicant and home address.
 - (c) Address of employment and department or office, job title.
- 10. Registration Fee

The required registration fee for each course is stated in the appropriate appendix. Ministry employees may pay the fee on registration. Registration fees must accompany the applications of non-Ministry applicants and

 - (a) For all courses except the Soils Course, Appendix 11 and MEA/MOE co-sponsored courses, Appendices 17, 18 and 19. The cheque or money order must be made payable to Training, Certification and Safety Section.
 - (b) For the Soils Course, the registration fee is payable to the Community College on registration.
 - (c) For MEA/MOE co-sponsored courses, the cheque or money order must be made payable to Municipal Engineers Association of Ontario.

11. An application (and registration fee, if applicable) will be forwarded to the Registration Secretary at the address shown in the Preface and will only be accepted during the period shown on the course schedule and summarized below:

October Courses	-	Jul. 15 - Aug. 15
November Courses	-	Aug. 15 - Sep. 15
December Courses	-	Sep. 15 - Oct. 15
January Courses	-	Oct. 15 - Nov. 15
February Courses	-	Nov. 15 - Dec. 15
March Courses	-	Dec. 15 - Jan. 15
April Courses	-	Jan. 15 - Feb. 15

12. As soon as possible after the closing date, the individual's employer will be notified of the acceptance or rejection of the application. If the course of first choice is oversubscribed and an alternate has been shown on the application, the nominee will be listed for the alternative course subject to confirmation by the employer.
13. Prior to a course an information package will normally be forwarded to each applicant. This will include general course information, a sketch map showing course location and, in most cases, reference material for pre-course study.
14. Pre-Course Study
Pre-course study is required for many of the courses and it is essential that employers encourage applicants to review the material provided for that purpose. For certain courses, the applicant will be required to submit solutions to problems forwarded with study material. While these do NOT count towards the individual's final mark, they may be a consideration in the case of a marginal failure.
15. Course Completion
The appropriate appendix shows the minimum average to be attained for successful completion of the course. A candidate's results will be forwarded to his employer, who is responsible for informing the individual.

GENERAL INFORMATION

16. Any requests for any information, including the status of an application or the availability of space on a course, will be directed to the Registration Secretary - Telephone (416) 965-6994.
17. Training Facilities
 - (a) These are located at the Brampton-Chinguacousy Sewage Treatment Plant, the Ministry building at 4375 Chesswood Drive in Downsview, or the Ministry Laboratory, Resources Road, near the intersection of Islington Avenue and Highway 401. The sketch map at Appendix 28 shows these locations.
 - (b) Training conducted outside of Toronto will be held in suitable accommodation obtained specifically for the session.
18. Transportation and Accommodation
 - (a) These arrangements, including reservations, are the responsibility of the trainee. The sketch maps indicate motels and hotels which are within reasonable proximity to the training facilities.
 - (b) Employers must ensure that trainees on arrival at the course location are in possession of sufficient funds to meet anticipated expenses, including the registration fee if not previously paid.
19. Dress and Deportment
 - (a) While only casual dress is required, trainees should maintain a neat and clean appearance. Laboratory coats will be provided on workshops to protect personal clothing.
 - (b) So that the course timetable may be adhered to, trainees must be on time throughout the training session. Tardiness and/or absence by an individual will be reported to his employer.
 - (c) Name tags to be provided to trainees will be worn at all times.



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COURSE DESCRIPTION

BASIC SEWAGE TREATMENT OPERATION COURSE

PURPOSE:

The Basic Sewage Treatment Operation Course is designed primarily to increase on the job efficiency of waste water treatment plant operators. The program stresses "the need to know" rather than the "nice to know" of all processes associated with waste water treatment. This course is a prerequisite to more advanced courses including the Activated Sludge Workshop.

SCOPE:

The course covers the following topics:

- A. SEWAGE CHARACTERISTICS
- B. MICROBIOLOGY OF SEWAGE
- C. PRIMARY TREATMENT
- D. BASIC CONSIDERATIONS OF THE ACTIVATED SLUDGE PROCESS AND VARIATIONS
- E. DIGESTION OF SLUDGE
- F. SLUDGE HANDLING
- G. INDUSTRIAL WASTE
- H. CHLORINATION OF SEWAGE
- I. RECORDS AND BASIC LABORATORY TESTS
- J. PRACTICAL MATHEMATICS
- K. PLANT MAINTENANCE, SAFETY AND AND SAFETY INSPECTIONS

PRE-COURSE

FAMILIARIZATION:

Pre-course study material will be provided. When preparing to attend this course, an applicant should:

- a. Review basic arithmetic (addition, multiplication, division, subtraction, percentages, and decimals) at the grade VIII level.
- b. Familiarize himself with the operations dealt with on the course.

PREREQUISITES:

None, but preference will be given to personnel engaged in the operation of wastewater treatment plants.

PASSING GRADE:

70%.

REGISTRATION FEE: \$20 payable to "Training, Certification and Safety Section"

COURSE DESCRIPTIONBASIC WATER TREATMENT OPERATION COURSE*PURPOSE:*

The Basic Water Treatment Operation Course is designed primarily to increase on the job efficiency of water treatment plant operators. The program stresses "the need to know" rather than the "nice to know" of all processes associated with water treatment. This course is a prerequisite to the Surface Water Treatment Workshop.

SCOPE:

The Course covers the following topics:

- A. WATER QUALITY OBJECTIVES AND PUBLIC HEALTH SIGNIFICANCE
- B. GROUNDWATER SUPPLIES
- C. COAGULATION, FLOCCULATION AND SEDIMENTATION
- D. WATER FILTRATION
- E. MAINTENANCE
- F. CHLORINATION
- G. WATER BACTERIOLOGY
- H. SAFETY AND SAFETY INSPECTIONS
- I. PRACTICAL MATHEMATICS
- J. RECORDS
- K. CARE, MAINTENANCE AND OPERATION OF A DISTRIBUTION SYSTEM

*PRE-COURSE**FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend this course, an applicant should:

- a. Review basic arithmetic (addition, multiplication, division, subtraction, percentages and decimals) at the Grade VIII level.
- b. Familiarize himself with the operations dealt with on the course.

PREREQUISITES:

None, but preference will be given to personnel engaged in the operation of water treatment plants.

PASSING GRADE:

70 percent.

REGISTRATION FEE: \$20 payable to "Training, Certification and Safety Section"

COURSE DESCRIPTIONBASIC WATER/SEWAGE TREATMENT OPERATION COURSE*PURPOSE:*

This course is designed to increase the knowledge of regional environmental officers involved in the inspection of water and sewage treatment plants. It is a condensation of subjects included in the two five-day operator orientated courses, attached as Appendices 1 and 2. Environmental officers must complete this course prior to attending the Activated Sludge Workshop and the Surface Water Treatment Workshop.

SCOPE:

The course covers the following topics:

- A. WATER QUALITY OBJECTIVES
- B. GROUND WATER SUPPLIES
- C. COAGULATION, FLOCCULATION, SEDIMENTATION AND FILTRATION
- D. CARE, MAINTENANCE AND OPERATION OF WATER DISTRIBUTION SYSTEMS
- E. SEWAGE CHARACTERISTICS
- F. BASIC CONSIDERATIONS IN ACTIVATED SLUDGE PROCESS AND VARIATIONS
- G. DIGESTION OF SLUDGE
- H. SLUDGE HANDLING
- I. INDUSTRIAL WASTES
- J. WATER & SEWAGE BACTERIOLOGY
- K. CHLORINATION OF WATER & SEWAGE
- L. PLANT SAFETY AND SAFETY INSPECTIONS

*PRE-COURSE**FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend this course an applicant should familiarize himself with the operations dealt with on the course by thoroughly reviewing both the Basic Water Treatment Operation and Basic Sewage Treatment Operations manuals.

PREREQUISITES:

This course is restricted to Ministry environmental officers.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTIONACTIVATED SLUDGE WORKSHOP*PURPOSE:*

This workshop is designed primarily to increase on-the-job efficiency of waste water treatment plant operators in laboratory analysis and interpretation of test results. It is specifically directed to operators engaged in the activated sludge process and stresses "the need to know" rather than the "nice to know".

SCOPE:

The workshop which includes considerable "hands-on" participation covers the following:

- A. ACTIVATED SLUDGE - GENERAL CONSIDERATIONS
- B. MICROSCOPIC EXAMINATION OF ACTIVATED SLUDGE
- C. DISSOLVED OXYGEN TESTS AND REQUIREMENTS
- D. SAMPLING
- E. INTERPRETATION OF ANALYTICAL RESULTS
- F. pH MEASUREMENT USING ELECTROMETRIC METHOD
- G. SETTLING TEST
- H. SUSPENDED AND VOLATILE SUSPENDED SOLIDS
- I. TOTAL SOLIDS AND TOTAL VOLATILE SOLIDS
- J. BOD TEST
- K. PHOSPHOROUS DETERMINATION

*PRE-COURSE
FAMILIARIZATION:*

Precourse study material will be provided. When preparing to attend this workshop an applicant should:

- a. Review basic arithmetic (addition, multiplication, division, subtraction, percentages, and decimals) at the Grade VIII level.
- b. Acquaint himself with the operations dealt with on the course.

PREREQUISITES:

Successful completion of:

- a. OWRC Basic, Intermediate and Senior Courses for Sewage Works Operators
or
- b. Ministry of the Environment Introduction to Waste Treatment Course
or
- c. Ministry of the Environment Basic Sewage Treatment Operation Course
or
- d. Ministry of the Environment Basic Water/Sewage Treatment Operation Course.

PASSING GRADE:
70 per cent

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

BASIC GAS CHLORINATION WORKSHOP

PURPOSE:

The Basic Gas Chlorination Workshop is designed to increase on-the-job efficiency of water and wastewater treatment plant operators. The program stresses "the need to know" rather than the "nice to know".

SCOPE:

The Workshop which includes considerable "hands-on" participation covers the following topics:

- A. PURPOSES OF CHLORINATION AND QUALITY CONTROL
- B. TYPES OF CHLORINE FEEDERS AND THEIR USAGE
- C. CONTROL SYSTEMS
- D. PROPERTIES AND PHYSIOLOGICAL EFFECTS OF CHLORINE
- E. STORAGE AND HANDLING OF CHLORINE GAS CYLINDERS
- F. SAFETY AND SAFETY INSPECTIONS
- G. CHLORINATION EQUIPMENT & COMPONENTS
- H. START-UP & SHUT-DOWN PROCEDURES
- I. GENERAL MAINTENANCE
- J. TROUBLE SHOOTING
- K. CHLORINATION LABORATORY TESTS

*PRE-COURSE
FAMILIARIZATION:*

Precourse study material will be provided. When preparing to attend this workshop an applicant should:

- a. Review basic arithmetic (addition, multiplication, division, subtraction, percentages and decimals) at the Grade VIII level.
- b. Familiarize himself with the operations dealt with on the course.

PREREQUISITES:

None, but preference will be given to water and wastewater treatment plant personnel.

PASSING GRADE:

70 per cent

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTIONSURFACE WATER TREATMENT WORKSHOP*PURPOSE:*

The Surface Water Treatment Workshop is designed to increase the knowledge of water treatment plant operators and regional environmental officers responsible for the inspection of water treatment plants. The program stresses "the need to know" rather than the "nice to know" aspects of surface water treatment.

SCOPE:

The workshop which includes considerable "hands-on" participation covers the following topics:

- A. BASIC WATER CHEMISTRY
- B. COAGULATION
- C. FILTRATION
- D. CHEMICAL DOSAGES
- E. TASTE & ODOUR CONTROL
- F. LABORATORY ANALYSES

*PRE-COURSE**FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend this workshop an applicant should:

- a. Review basic arithmetic (addition, multiplication, division, subtraction, percentages, and decimals) at the Grade VIII level.
- b. Familiarize himself with the operations dealt with on the course.

PREREQUISITES:

Successful completion of:

- a. OWRC Basic, Intermediate & Senior Courses for Water Works Operators
- or
- b. Ministry of the Environment Introduction to Water Treatment Course
- or
- c. Ministry of the Environment Basic Water Treatment Operation Course
- or
- d. Ministry of the Environment Basic Water/Sewage Treatment Operation Course.

PASSING GRADE:

70 per cent

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

MAINTENANCE GAS FITTERS CERTIFICATE COURSE

PURPOSE:

As required by the Energy Act 1971 and related Regulations, the Maintenance Gas Fitters Certificate Course is designed to certify personnel who operate and maintain the gas system in a wastewater treatment plant.

SCOPE:

The course covers the following topics:

- A. *DIGESTER MAINTENANCE*
- B. *DIGESTER GAS TRANSMISSION LINES*
- C. *CONTROL AND SAFETY EQUIPMENT*
- D. *BOILER AND BOILER CONTROL TRAIN*

*PRE-COURSE
FAMILIARIZATION:*

Pre-study material will be provided. When preparing to attend this course, an applicant should familiarize himself with the operations dealt with on the course, and

- a. review the Gas Utilization Code Book, Regulations 254 and Regulation 255 Propane
- b. review the Interim Safety Requirements (ISR)105
- c. review the Installation Code for Oil Burning Equipment CBA Standard B139-71.

PREREQUISITES:

The applicant must be employed in the operation and maintenance of the gas system in a wastewater treatment plant.

PASSING GRADE:

A passing grade of 75 per cent must be attained on a final test administered by the Energy Safety Branch of the Ministry of Consumer and Commercial Relations.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

PRIMARY TREATMENT AND DIGESTION WORKSHOP

PURPOSE:

The Primary Treatment and Digestion Workshop is designed primarily to increase on-the-job efficiency of wastewater treatment plant operators. The program stresses "the need to know" rather than the "nice to know" of all processes associated with primary wastewater treatment.

SCOPE:

The course covers the following topics:

- A. RAW SEWAGE CHARACTERISTICS
- B. PUMPING STATIONS & STANDBY POWER
- C. PRETREATMENT WORKS
- D. PRIMARY SEDIMENTATION
- E. DISINFECTION
- F. LABORATORY ANALYSES
- G. ANAEROBIC AND AEROBIC DIGESTION - THEORY
- OPERATION & CONTROLS
- PROBLEMS
- H. SLUDGE PROCESSING

*PRE-COURSE
FAMILIARIZATION*

Pre-course study material will be provided. When preparing to attend this workshop an applicant should:

- a. review basic arithmetic (addition, multiplication, division, subtraction, percentages and decimals) at the Grade VIII level
- b. familiarize himself with the operations dealt with on the course.

PREREQUISITES:

Basic Sewage Treatment Operation Course.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

PREVENTIVE MAINTENANCE WORKSHOP

PURPOSE:

The Preventive Maintenance Workshop is designed to increase the knowledge and on-the-job efficiency of those involved in the maintenance of water and wastewater treatment plants. The program stresses the "need to know" rather than the "nice to know".

SCOPE:

The Workshop which includes "hands-on" participation covers the following topics:

- A. PREVENTIVE MAINTENANCE PROGRAM
- B. PHYSICAL MAINTENANCE - BUILDINGS, PLANT TANKS & CHANNELS, GROUNDS
- C. MECHANICAL MAINTENANCE
- D. ELECTRICAL MAINTENANCE
- E. FLOW MEASURING DEVICES

PRE-COURSE

FAMILIARIZATION:

Pre-course study material will be provided. When preparing to attend this workshop an applicant should:

- a. review basic arithmetic (addition, multiplication, division, subtraction, percentages and decimals) at the Grade VIII level
- b. familiarize himself with the operations dealt with on the course.

PREREQUISITES:

None, but preference will be given to personnel employed in water and wastewater treatment plants.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTIONPRIVATE SEWAGE SYSTEMS COURSE*PURPOSE:*

The Private Sewage Systems Course is designed to increase on-the-job efficiency of environmental officers and public health inspectors dealing with the construction and operation of private sewage systems and with land use proposals involving these systems. It provides a basis for establishing a uniform standard in the application and interpretation of Part VII of The Environmental Protection Act 1971 and the related Regulation 229/74 Sewage Systems.

SCOPE:

The Course covers the following topics:

- A. ENVIRONMENTAL PROTECTION ACT 1971 AND REGULATIONS
- B. CLASSES AND TYPES OF PRIVATE SEWAGE SYSTEMS
- C. CERTIFICATES OF APPROVAL, PERMITS, FORMS AND PROCEDURES
- D. LAND USE CONTROL AND THE ASSESSMENT OF LAND FOR SUBDIVISIONS, SEVERANCES AND FOR THE INSTALLATION OF PRIVATE SEWAGE SYSTEMS
- E. SOILS AND GROUNDWATER AS THEY AFFECT PRIVATE SEWAGE SYSTEMS
- F. ENFORCEMENT

*PRE-COURSE
FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend the course, an applicant should:

- a. Review The Environmental Protection Act 1971 (in particular Part VII) and Regulation 229/74 Sewage Systems.
- b. Acquaint himself with the operations related to the assessment of land use proposals and inspection of private sewage systems installations.

PREREQUISITES:

An applicant must be employed as an environmental officer or a public health inspector, administering Part VII of The Environmental Protection Act 1971.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

PREVENTIVE MAINTENANCE WORKSHOP

PURPOSE:

The Preventive Maintenance Workshop is designed to increase the knowledge and on-the-job efficiency of those involved in the maintenance of water and wastewater treatment plants. The program stresses the "need to know" rather than the "nice to know".

SCOPE:

The Workshop which includes "hands-on" participation covers the following topics:

- A. PREVENTIVE MAINTENANCE PROGRAM
- B. PHYSICAL MAINTENANCE - BUILDINGS, PLANT TANKS & CHANNELS, GROUNDS
- C. MECHANICAL MAINTENANCE
- D. ELECTRICAL MAINTENANCE
- E. FLOW MEASURING DEVICES

PRE-COURSE

FAMILIARIZATION:

Pre-course study material will be provided. When preparing to attend this workshop an applicant should:

- a. review basic arithmetic (addition, multiplication, division, subtraction, percentages and decimals) at the Grade VIII level
- b. familiarize himself with the operations dealt with on the course.

PREREQUISITES:

None, but preference will be given to personnel employed in water and wastewater treatment plants.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTIONPRIVATE SEWAGE SYSTEMS COURSE*PURPOSE:*

The Private Sewage Systems Course is designed to increase on-the-job efficiency of environmental officers and public health inspectors dealing with the construction and operation of private sewage systems and with land use proposals involving these systems. It provides a basis for establishing a uniform standard in the application and interpretation of Part VII of The Environmental Protection Act 1971 and the related Regulation 229/74 Sewage Systems.

SCOPE:

The Course covers the following topics:

- A. ENVIRONMENTAL PROTECTION ACT 1971 AND REGULATIONS
- B. CLASSES AND TYPES OF PRIVATE SEWAGE SYSTEMS
- C. CERTIFICATES OF APPROVAL, PERMITS, FORMS AND PROCEDURES
- D. LAND USE CONTROL AND THE ASSESSMENT OF LAND FOR SUBDIVISIONS, SEVERANCES AND FOR THE INSTALLATION OF PRIVATE SEWAGE SYSTEMS
- E. SOILS AND GROUNDWATER AS THEY AFFECT PRIVATE SEWAGE SYSTEMS
- F. ENFORCEMENT

*PRE-COURSE**FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend the course, an applicant should:

- a. Review The Environmental Protection Act 1971 (in particular Part VII) and Regulation 229/74 Sewage Systems.
- b. Acquaint himself with the operations related to the assessment of land use proposals and inspection of private sewage systems installations.

PREREQUISITES:

An applicant must be employed as an environmental officer or a public health inspector, administering Part VII of The Environmental Protection Act 1971.

PASSING GRADE:

70 percent.

REGISTRATION FEE:

\$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

SOILS COURSE

PURPOSE:

This course, held at a Community College, is designed to increase on-the-job efficiency of environmental officers and inspectors dealing with land use proposals involving private sewage systems installations, or the inspection of lots on which the construction or installation of such a system is proposed. It emphasizes the significance of soil in subsurface sewage disposal.

SCOPE:

The course covers the following topics:

- A. SOILS IDENTIFICATION AND CLASSIFICATION
- B. WATER IN SOIL
- C. FIELD SAMPLING AND SAMPLING PROCEDURES
- D. LABORATORY TESTING AND REPORTING
- E. INTERPRETATION OF TEST RESULTS

*PRE-COURSE
FAMILIARIZATION:*

When preparing to attend this course, an applicant should review field identification and description of soils and soil sampling in the field.

PREREQUISITES:

An applicant must be employed in the assessment of land use proposals involving private sewage disposal systems.

PASSING GRADE:

A trainee must obtain 60% in tests administered by the Community College.

REGISTRATION FEE:

The fee is payable on registration to the Community College.

COURSE DESCRIPTION

INDUSTRIAL ABATEMENT (AIR) COURSE

PURPOSE:

The Industrial Abatement (Air) Course consists of three parts. It is designed to familiarize new personnel with the air management aspect of Industrial Abatement, and to increase the efficiency of provincial officers involved with those duties.

SCOPE:

Part I:

- A. INTRODUCTION TO AIR MANAGEMENT: VARIOUS JURISDICTIONS
- B. EFFECTS OF AIR POLLUTION
- C. FUELS; COMBUSTION; BOILERS; INCINERATION

Part II:

- A. METEOROLOGICAL ASPECTS AND MEASUREMENT OF AIR POLLUTION
- B. AIR CONTAMINANT DEPOSITS; ODOURS
- C. ENVIRONMENTAL OFFICERS' DUTIES; REPORTS
- D. AGRICULTURAL PROBLEMS

Part III:

- A. INDUSTRIAL PROCESSES; SEWAGE TREATMENT
- B. CONCEPTS OF INDUSTRIAL AIR POLLUTION CONTROL
- C. CONTROL EQUIPMENT

PRE-COURSE

FAMILIARIZATION:

Pre-course study material including a manual will be provided. When preparing to attend any part of this course an applicant must study the training manual.

PREREQUISITES:

An applicant must be a provincial officer responsible for functions related to the air management aspects of the Ministry of the Environment's program.

There is no prerequisite that one part of the course be taken before another, but it is strongly recommended that applicants who are new to this field take Part I first.

PASSING GRADE:

Those trainees who achieve passing grades for all three parts of the course will be issued a certificate.

Part I: 60 per cent
Part II: 60 per cent
Part III: 60 per cent

Environmental Officers who passed the former Air Management Branch's Air Pollution Inspector's Training Course will only be required to complete Part III successfully to be awarded a certificate.

REGISTRATION FEE:

For each part of the course, \$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

VISIBLE EMISSIONS IDENTIFICATION COURSE

PURPOSE:

The Visible Emissions Identification Course is designed to train Ministry personnel and certify them as being proficient in the identification of the opacities of visible emissions. It will also help to prepare the provincial officer for appearance in court as an expert witness. The course is a combination of lecture and demonstration, with practice.

SCOPE:

The course covers the following topics:

- A. VISIBLE EMISSIONS - THEIR CAUSE AND REGULATION
- B. CLASSIFICATION AND IDENTIFICATION OF SOURCES
- C. PRINCIPLES OF COMBUSTION
- D. METEOROLOGICAL FACTORS IN READING OF VISIBLE EMISSIONS
- E. LEGAL ASPECTS AND COURTROOM APPEARANCES
- F. PRACTICE IN IDENTIFICATION OF OPACITIES OF VISIBLE EMISSIONS

PRE-COURSE

FAMILIARIZATION:

When preparing to attend this course the applicant should read in advance the Visible Emissions Identification Manual, which will be sent out with pre-course material.

PREREQUISITE:

An applicant for certification must be a provincial officer of the Ministry of the Environment.

PASSING GRADE:

- (i) 70 per cent (theoretical instruction)
- (ii) identification of the opacity of a set number of consecutive visible emissions within the permitted deviation standards.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTIONNOISE CONTROL - ACOUSTIC TECHNOLOGY COURSE*PURPOSE:*

The acoustic technology course consists of five parts. It is designed to familiarize personnel with the techniques of practical acoustics required to fulfill the obligations of the municipal noise control officer or of other noise control and abatement agencies. Upon successful completion of the appropriate parts of the course, the trainee will be qualified to perform noise control duties at the level indicated by the certificate rank awarded, as follows:

<u>CERTIFICATE</u>	<u>COURSE</u>	<u>COMPETENCY LEVEL</u>
Class 1	Acoustics I and II	Noise Control Investigator
Class 2	Acoustics I,II and III	Assistant Noise Control Officer
Class 3	Acoustics I,II,III,IV&V	Noise Control Officer

*SCOPE:**ACOUSTICS I:*

INTRODUCTORY ACOUSTIC THEORY. LAW. HANDLING OF COMPLAINTS. USE OF SIMPLE SOUND LEVEL METER, OCTAVE BAND ANALYSER AND CALIBRATION TECHNIQUES. MEASUREMENT OF TRAFFIC NOISE AND INDUSTRIAL NOISE. PROCEDURES. REVIEW. EXAMINATION.

ACOUSTICS II:

REVIEW OF PREVIOUS WORK. ACOUSTIC THEORY. LAW; E.P.A., BY-LAW. COMPLAINT STATISTICS. INVESTIGATIONS, REPORT WRITING. ANSI, ISO AND OTHER STANDARDS. USE OF 1/3 OCTAVE ANALYSER, TAPE RECORDER, IMPULSE SLM. AUDIOMETRICS, PERSONAL HEARING TEST. MORE FIELD WORK. REVIEW. EXAMINATION.

ACOUSTICS III:

REVIEW OF PREVIOUS WORK. ACOUSTIC THEORY. LAW, STOP ORDERS, CONTROL ORDERS, PROVINCIAL OFFICER'S REPORT, PROSECUTIONS, GRAPHIC ANALYSER, STATISTICAL ANALYSER. VIBRATION ANALYSIS. ADVANCED STATIONARY SOURCE NOISE ANALYSIS. LABORATORY. FIELD WORK. REVIEW. EXAMINATION.

ACOUSTICS IV:

REVIEW OF PREVIOUS WORK. ADVANCED ACOUSTIC THEORY. USE OF STATISTICAL ANALYSER, WESTERN MONITOR, DOSIMETER, REAL TIME ANALYSER. OFF ROAD AND ROAD SIDE MEASUREMENTS. LOCATION AND ACOUSTICAL EVALUATION AND LEGAL DOCUMENTATION OF TEST SITES. VISITS TO OTHER MINISTRIES CONCERNED WITH NOISE. LAW. ADVANCED PROCEDURES. SELECTION OF INSTRUMENTATION. REVIEW. EXAMINATION.

ACOUSTICS V:

REVIEW OF PREVIOUS WORK. COMMUNITY NOISE SURVEYS. LAND USE CONCEPTS, NOISE MAPS, NOISE CONTOURS. DIGITAL & STATISTICAL SAMPLING TECHNIQUES. USE OF L_{eq} , L_{90} , L_{dn} , N.E.F. AND OTHER INDICES. COMPUTER ANALYSIS OF DATA. FIELD WORK. REVIEW OF LAW, BY-LAW AND PROCEDURES. FINAL EXAMINATION.

PRE-COURSE FAMILIARIZATION:

Pre-course study material, including a manual, will be provided. When preparing to attend any part of this course, an applicant must complete the pre-course requirements.

PREREQUISITES:

Courses are to be taken in the order designated. Possession of a valid certificate of a lower rank is a prerequisite for all courses Acoustic II through Acoustic V inclusive. Recognition will be given for prior formal training in acoustics.

Priority will be given to applicants who are:

1. sponsored by a municipality and designated by the municipality to implement its noise control program.
2. professional engineers or environmental officers on M.O.E. regional staffs.
3. other qualified persons sponsored by M.O.E.
4. professional engineers sponsored by a consulting firm specializing in acoustics.

PASSING GRADE:

Those trainees who achieve a passing grade will be awarded a certificate of competency in acoustic technology in the rank achieved, valid for three calendar years only. The passing grade for all courses will be 60 per cent.

REGISTRATION FEE:

Upon application, and subject to eligibility and acceptance, for each course, payable to the "Training, Certification and Safety Section". The fee is:

- | | |
|--|-------|
| 1. municipal employees | \$ 50 |
| 2. M.O.E. employees | \$ 50 |
| 3. professional engineers
(consultants) | \$150 |

COURSE DESCRIPTIONCONTROL OF LIQUID INDUSTRIAL WASTES IN MUNICIPALITIES*PURPOSE:*

The course on the Control of Liquid Industrial Wastes in Municipalities is designed to train municipal industrial waste control personnel, to assist managers in developing control programs, and to increase on the job efficiency of environmental officers.

SCOPE:

The course covers the following topics:

- A. GENERAL CHARACTERISTICS AND PROBLEMS OF INDUSTRIAL WASTES
- B. GENERAL METHODS OF TREATMENT OF INDUSTRIAL WASTES
- C. DETAILS ON PROCESSES, WASTES PRODUCED AND METHODS OF TREATMENT FOR SPECIFIC INDUSTRIAL CLASSIFICATIONS
- D. CONDUCT OF INDUSTRIAL WASTES SURVEYS AND INSPECTIONS
- E. CONTINGENCY PLANNING FOR MUNICIPALITIES
- F. FLOW MEASUREMENT AND SAMPLING
- G. OUTLINE OF THE MUNICIPAL INDUSTRIAL WASTES CONTROL PROGRAM

*PRE-COURSE
FAMILIARIZATION:*

Pre-course study material will be provided. When preparing to attend the course, an applicant should familiarize himself with:

- a. the problems in the disposal of liquid industrial wastes in his area
- b. the control program organization
- c. the local sewer use by-law(s)

PREREQUISITES:

None.

PASSING GRADE:

55 percent.

REGISTRATION FEE: \$20 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

SAFETY AND FIRST AID COURSE

PURPOSE:

This course is designed to train environmental officers in walkthrough safety inspections, to upgrade water and wastewater treatment plant personnel in the handling of plant safety equipment and to qualify regional personnel in First Aid Treatment and Basic Rescue. A number of training sessions will be held over a five day period in various locations within a region.

SCOPE:

The training will consist of lectures, demonstrations and "Hands On" in the following topics:

- A. RESPONSIBILITIES FOR SAFETY
- B. SAFETY PRACTICES AND INSPECTIONS
- C. FIRE DEMONSTRATIONS
- D. AIR PACK DRILL
- E. BASIC RESCUE
- F. FIRST AID
- G. CASUALTY HANDLING

PRE-COURSE

FAMILIARIZATION:

The applicants should:

- a. familiarize themselves with their plant fire extinguishers and air packs
and/or
- b. familiarize themselves with the Standard St. John Ambulance First Aid Book.

PREREQUISITES:

None, but preference will be given to Ministry employees.

PASSING GRADE:

Candidate must be able to demonstrate methods of artificial respiration, control of haemorrhaging, securing fractures, use of fire extinguisher and air packs and obtain 70% on a written first aid test.

REGISTRATION FEE:

\$10.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

SEWER AND WATERMAIN DESIGN COURSE

PURPOSE:

This course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to broaden the understanding and knowledge of personnel who are engaged in the design of Sewer and Watermain Systems.

SCOPE:

The Course includes presentation and discussion of the following topics:

- A. MANUAL REVIEW
- B. GRAPHS AND CHARTS EXPLANATION
- C. ENGINEERING AGREEMENTS
- D. PROJECT PROCEDURES
- E. MOE APPROVALS
- F. SEWER DESIGN: GENERAL
- G. PROBLEM SOLVING: SEWER DESIGN
- H. SEWER APPURTENANCES
- I. CONSTRUCTION PRACTICES
- J. HOW MAINTENANCE CAN AFFECT DESIGN
- K. PROBLEM SOLVING IN HYDRAULIC ASPECTS OF SEWER DESIGN
- L. WATERMAIN SWABBING
- M. DESIGN OF WATERMAINS AND APPURTENANCES
- N. STRUCTURAL PROBLEM SOLVING IN SEWER DESIGN

PRE-COURSE

FAMILIARIZATION:

Pre-course study material will be provided. Candidates must:

- a. review the lecture notes and other material mailed out for pre-course study
- b. answer the pre-course study problems, which will be discussed during the course.

PREREQUISITES:

Candidates for this course should have some basic understanding of sewer and watermain design. Those attending this course should be employed, at least in part, in the design of Sewer and Watermain Systems.

PASSING GRADE:

60%

REGISTRATION FEE:

\$40.00 payable to the Municipal Engineers Association of Ontario.

COURSE DESCRIPTION

SEWER AND WATERMAIN CONSTRUCTION
INSPECTORS COURSE: LEVEL I

PURPOSE:

This four-day course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to broaden the understanding and knowledge of inspectors engaged in supervising the construction of Sewers and Watermains.

SCOPE:

The course includes presentations on and discussions of the following topics:

- A. *ROLE OF THE INSPECTOR*
- B. *RECORDS*
- C. *LAYOUT AND GRADES*
- D. *PIPE MATERIALS*
- E. *SEWER CONSTRUCTION AND TESTING*
- F. *WATERMAIN CONSTRUCTION AND TESTING*
- G. *CONCRETE HANDLING*
- H. *SAFETY PRACTICES AND REGULATIONS*

PRE-COURSE
FAMILIARIZATION:

Pre-course study material will be provided. Personnel attending this course should be familiar with the Regulations in their own area.

PREREQUISITES:

Those attending the course should be employed in the private or public sector where at least part of the job function is supervision of the construction of Sewers and Watermains.

PASSING GRADE:

60%

REGISTRATION FEE:

\$20.00 payable to Municipal Engineers Association of Ontario.

COURSE DESCRIPTION

SEWER AND WATERMAIN CONSTRUCTION
INSPECTORS COURSE: LEVEL II

PURPOSE:

This course, developed and conducted jointly with the Ontario Municipal Engineers Association, is intended to further broaden the understanding and knowledge of inspectors engaged in supervising the construction of Sewers and Watermains.

SCOPE:

The course includes presentation and discussion of the following topics:

- A. NEW METHODS
- B. BASIC SOILS
- C. PLANT EQUIPMENT
- D. SEWER AND WATERMAIN MATERIALS
- E. WATERMAIN DESIGN
- F. SEWER DESIGN
- G. CONSTRUCTION SAFETY
- H. REINFORCED CONCRETE THEORY
- I. GENERAL CONTRACTING PROCEDURES

PRE-COURSE
FAMILIARIZATION:

Pre-course study material will be provided. Personnel attending this course should review material covered by the Level I course.

PREREQUISITES:

Successful completion of Construction Inspectors Course\ Level I or equivalent background of education and experience.

PASSING GRADE:

60%.

REGISTRATION FEE:

\$20.00 payable to the Municipal Engineers Association of Ontario.

COURSE DESCRIPTION

PUMP OPERATION WORKSHOP

This workshop, being developed jointly with the Ontario Municipal Engineers Association, is designed to increase the knowledge and skills of personnel involved in operating and maintaining all forms of pumping and allied equipment.

The curriculum has not yet been developed, but it is anticipated that the workshop will be held on schedule.

COURSE DESCRIPTION

ENVIRONMENTAL CONSIDERATIONS IN PROJECT PLANNING COURSE

This course, being developed jointly with the Ontario Municipal Engineers Association, is designed to provide the staff of municipal engineering departments with increased knowledge of environmental factors to consider in any project that is planned.

The curriculum is not yet developed, but it is anticipated that the course will be held on schedule.

COURSE DESCRIPTIONWASTE DISPOSAL SITE SEMINAR*PURPOSE:*

Waste Disposal Site Seminars are held to increase on-the-job efficiency of municipal and private site operators, and Ministry environmental officers. The seminar for operators outlines suitable waste disposal practices and standards, operating procedures and applicable legislation. Environmental protection and public relations as paramount concerns of the operation are emphasized. Seminars for environmental officers emphasize inspection procedure and forms related to land use assessment and operation of waste disposal sites.

SCOPE:

The seminar includes the presentation and discussion of papers on the following topics:

- A. ACT AND REGULATIONS - THE AIMS AND NEEDS
- B. TERMINOLOGY AND DEFINITIONS
- C. SITE OPERATION: CRITERIA, TYPE, EQUIPMENT, COSTING
- D. LEACHATE AND GAS CONTROL
- E. PROCEDURE FOR CLOSING SITES
- F. INSPECTION AND PROCEDURE FORMS
- G. SPECIAL PROCEDURES FOR DISPOSAL OF PROBLEM MATERIAL
- H. AIDS FOR WINTER OPERATIONS

*PRE-COURSE**FAMILIARIZATION:*

When preparing to attend this seminar the applicant should review the Act and Regulations pertaining to waste disposal sites and familiarize himself with the subject matter covered in the manual Waste Disposal by Landfilling.

PREREQUISITE:

Those attending should have direct operational responsibilities for waste disposal sites or be government employees having responsibility for the inspection of waste disposal sites.

PASSING GRADE:

Not applicable.

REGISTRATION FEE:

\$20.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

CONTINGENCY PLANNING SEMINAR

PURPOSE:

This seminar is designed to familiarize senior Ministry staff with the Province of Ontario Contingency Plan and to inform them of the rôle of industry and other governmental organizations in dealing with spills of oil and other hazardous materials.

SCOPE:

The seminar includes presentations and discussions of the following topics:

- A. LEGISLATION PERTAINING TO SPILLS OF DELETERIOUS SUBSTANCES
- B. THE OBJECTIVES AND SCOPE OF THE PROVINCE OF ONTARIO CONTINGENCY PLAN
- C. THE ROLE OF INDUSTRY, MUNICIPALITIES, OTHER PROVINCIAL AGENCIES AND FEDERAL DEPARTMENTS IN SPILL INCIDENTS
- D. RECOMMENDED PROCEDURES FOR DEALING WITH SPILL INCIDENTS FROM THE VIEWPOINT OF REGULATORY AGENCIES AND INDUSTRY
- E. REPORTING PROCEDURES AND DATA FLOW
- F. SAFETY
- G. PUBLIC RELATIONS

*PRE-COURSE
FAMILIARIZATION:*

Personnel attending this seminar should be familiar with the Ontario Water Resources and the Environmental Protection Acts, and should be familiar with the countermeasures organization in their region for dealing with a spill of a deleterious substance.

PREREQUISITES:

Those attending the seminar should be employed in a supervisory function dealing with spill incidents or related emergency situations.

PASSING GRADE:

Not applicable.

REGISTRATION FEE:

\$35.00 payable to "Training, Certification and Safety Section".

COURSE DESCRIPTION

ICE SHELTER INSPECTION SEMINAR

PURPOSE:

The seminar, to be conducted in regional locations, is designed to acquaint provincial officers with The Environmental Protection Act 1971, which provides for control of pollution of the natural environment by owners or users of ice shelters. It also reviews the related functions of the Ministry of Natural Resources and suggests areas where co-operative efforts would assist in public relations and pollution control.

SCOPE:

The seminar includes the presentation and discussion of papers on the following topics:

- A. THE ENVIRONMENTAL PROTECTION ACT 1971 WITH EMPHASIS ON PART IV
- B. FORMS AND PROCEDURES
- C. PUBLIC RELATIONS
- D. RELATIONSHIP AND COOPERATION WITH THE MINISTRY OF NATURAL RESOURCES.

*PRE-COURSE
FAMILIARIZATION:*

When preparing to attend this seminar an applicant should review The Environmental Protection Act 1971.

PREREQUISITE:

Those attending the seminar should be environmental officers responsible for functions related to the Ice Shelter Program of the Ministry of the Environment.

PASSING GRADE:

Not applicable

REGISTRATION FEE:

None

COURSE DESCRIPTIONBOATING AND MARINA INSPECTION SEMINAR*PURPOSE:*

The seminar is conducted in regions to review procedures for inspection of boats equipped with toilet facilities and sewage retention systems and to familiarize staff with procedures regarding the enforcement of the Boating and Marina regulations.

SCOPE:

The seminar includes a field trip to marinas and boat pumpout stations as well as presentation and discussion of the following topics:

- A. REGULATION 229/74 SEWAGE SYSTEMS
- B. REGULATION 644 PLEASURE BOATING
- C. REGULATION 646 MARINAS
- D. LEGISLATION OF ADJOINING JURISDICTIONS
- E. SUMMARY CONVICTION PROCEDURES
- F. INSPECTION PROCEDURES AND FORMS
- G. PUBLIC RELATIONS

*PRE-COURSE**FAMILIARIZATION:*

Personnel attending the seminar should review the appropriate regulations.

PREREQUISITES:

Those attending the seminar should be environmental officers responsible for functions related to the inspection of boats and marinas.

PASSING GRADE:

Not applicable.

REGISTRATION FEE:

None.

PROGRAM SCHEDULE

PROGRAM (Capacity)	Dates	Location	Applications to be submitted		Remarks
			Not Before	Not After	
BASIC SEWAGE TREATMENT OPERATION (40)	20-24 Oct. 75	Toronto	15 July	15 Aug.	Operators only
	5- 9 Jan. 76	Sudbury	15 Oct.	15 Nov.	Operators only
	8-12 Mar. 76	Kingston	15 Dec.	15 Jan.	Operators only
	29 Mar-2 Apr./76	Toronto	15 Dec.	15 Jan.	Operators only
BASIC WATER TREATMENT OPERATION	27-31 Oct. 75	Toronto	15 July	15 Aug.	Operators only
(40)	1- 5 Dec. 75	London	15 Sep.	15 Oct.	Operators only
	12-16 Jan. 76	Toronto	15 Oct.	15 Nov.	Operators only
BASIC WATER/SEWAGE TREATMENT	29 Sep-3 Oct/75	Toronto	15 July	15 Aug.	MOE only
	17-21 Nov. 75	Toronto	15 Aug.	15 Sep.	MOE only
	2- 6 Feb. 76	Toronto	15 Nov.	15 Dec.	MOE only
ACTIVATED SLUDGE WORKSHOP (25)	6-10 Oct. 75	Toronto	15 July	15 Aug.	Operators only
	24-28 Nov. 75	Toronto	15 Aug.	15 Sep.	
	19-23 Jan. 76	Toronto	15 Oct.	15 Nov.	
	16-20 Feb. 76	Toronto	15 Nov.	15 Dec.	Operators only
BASIC GAS CHLORINATION WORKSHOP (25)	14-17 Oct. 75	Thunder Bay	15 July	15 Aug.	Operators only
	18-21 Nov. 75	Sudbury	15 Aug.	15 Sep.	
	16-19 Dec. 75	Toronto	15 Sep.	15 Oct.	Operators only
	20-23 Jan. 76	Kingston	15 Oct.	15 Nov.	
	17-20 Feb. 76	London	15 Nov.	15 Dec.	Operators only
	16-19 Mar. 76	Toronto	15 Dec.	15 Jan.	Operators only

PROGRAM SCHEDULE

PROGRAM (Capacity)	Dates	Location	Applications to be submitted		Remarks
			Not Before	Not After	
SURFACE WATER TREATMENT WORKSHOP	3- 7 Nov. 75	Toronto	15 Aug.	15 Sep.	
(25)	26-30 Jan. 76	Toronto	15 Oct.	15 Nov.	
	9-13 Feb. 76	Toronto	15 Nov.	15 Dec.	
MAINTENANCE GAS FITTERS (20)	3- 7 Nov. 75	Toronto	15 Aug.	15 Sep.	Operators only
	12-16 Jan. 76	Toronto	15 Oct.	15 Nov.	Operators only
	9-13 Feb. 76	Toronto	15 Nov.	15 Dec.	Operators only
PRIMARY TREATMENT AND DIGESTION (25)	23-27 Feb. 76	Toronto	15 Nov.	15 Dec.	Operators only
PREVENTIVE MAINTENANCE (25)	22-26 Mar. 76	Toronto	15 Dec.	15 Jan.	Operators only
PRIVATE SEWAGE SYSTEMS (40)	8-12 Dec. 75	Toronto	15 Sep.	15 Oct.	
	19-23 Jan. 76	London	15 Oct.	15 Nov.	
	1- 5 Mar. 76	Thunder Bay	15 Dec.	15 Jan.	
SOILS (20)	Dec. 75 To	to be Determined	15 Sep.	15 Oct.	a course to be conducted at each of 3 community colleges
	Feb. 76 "	" "	15 Nov.	15 Dec.	a course to be conducted at each of 3 community colleges
INDUSTRIAL ABATEMENT PART I (40)	6-10 Oct. 75	Toronto	15 July	15 Aug.	MOE only
	15-19 Dec. 75	Toronto	15 Sep.	15 Oct.	MOE only
	2- 6 Feb. 76	Toronto	15 Nov.	15 Dec.	MOE only
INDUSTRIAL ABATEMENT PART II (40)	3- 7 Nov. 75	Toronto	15 Aug.	15 Sep.	MOE only
	12-16 Jan. 76	Toronto	15 Oct.	15 Nov.	MOE only
	23-27 Feb. 76	Toronto	15 Nov.	15 Dec.	MOE only
INDUSTRIAL ABATEMENT PART III (40)	1- 5 Dec. 75	Toronto	15 Sep.	15 Oct.	MOE only
	22-26 Mar. 76	Toronto	15 Dec.	15 Jan.	MOE only

PROGRAM SCHEDULE

PROGRAM (Capacity)		Dates		Location		Applications to be submitted Not Before Not After		Remarks	
INDUSTRIAL ABATEMENT PART III (40)		5- 9 Apr. 76		Toronto		15 Jan.	15 Feb.	MOE only	
VISIBLE EMISSIONS		5- 9 May 75		Toronto		15 Mar.	15 Apr.	MOE only	
		12-16 May 75		Toronto		15 Mar.	15 Apr.	MOE only	
		Oct/Nov. 75		Regions				Recertification training to be carried out in Oct./Nov. 75	
CONTROL OF INDUSTRIAL WASTES IN MUNICIPALITIES (60)		17-21 Nov. 75		Toronto		15 Aug.	15 Sep.		
ACOUSTICS LEVEL I (100)		2- 6 June 75		Toronto		15 Mar.	15 Apr.	Nominations requested Feb. 75	
		23-27 June 75		Toronto		15 Mar.	15 Apr.	Nominations requested Feb. 75	
		5- 9 Jan. 76		Toronto		15 Oct.	15 Nov.		
ACOUSTICS LEVEL 2 (100)		8-12 Sep. 75		Toronto		15 June	15 July		
		22-26 Sep. 75		Toronto		15 June	15 July		
		26-30 Jan. 76		Toronto		15 Oct.	15 Nov.		
ACOUSTICS LEVEL 3 (40)		27-31 Oct. 75		Toronto		15 July	15 Aug.		
		8-12 Mar. 76		Toronto		15 Dec.	15 Jan.		
ACOUSTICS LEVEL 4 (40)		24-28 Nov. 75		Toronto		15 Aug.	15 Sep.		
		22-26 Mar. 76		Toronto		15 Dec.	15 Jan.		
ACOUSTICS LEVEL 5 (40)		16-20 Feb. 76		Toronto		15 Nov.	15 Dec.		
		12-16 Apr. 76		Toronto		15 Jan.	15 Feb.		
SAFETY (20 PER SESSION)		6-10 Oct. 75		Thunder Bay		15 July	15 Aug.	Training in safety and first aid to be conducted in selected locations within each region based on advice from Regional staff.	
		20-24 Oct. 75		Sudbury		15 July	15 Aug.		
		24-28 Nov. 75		London		15 Aug.	15 Sep.		

PROGRAM SCHEDULE

PROGRAM (Capacity)	Dates	Location	Applications to be submitted		Remarks
			Not Before	Not After	
SAFETY	15-19 Dec. 75	Hamilton	15 Sep.	15 Oct.	
	23-27 Feb. 76	Toronto	15 Nov.	15 Dec.	
	29 Mar-2 Apr/76	Kingston	15 Dec.	15 Jan.	
SEWER AND WATERMAIN DESIGN (75)	29 Sep-3 Oct/75	Toronto	15 Aug.	15 Sep.	
CONSTRUCTION INSPECTORS COURSE	8-12 Dec. 75	Toronto	15 Sep.	15 Oct.	
LEVEL I (50)					
CONSTRUCTION INSPECTORS COURSE	15-19 Mar. 76	Toronto	15 Dec.	15 Jan.	
LEVEL 2 (50)					
PUMPING OPERATIONS WORKSHOP (25)	29 Mar-2 Apr/76	Toronto	15 Dec.	15 Jan.	To be discussed with Municipal
ENVIRONMENTAL CONSIDERATIONS IN	1- 5 Mar. 76	Toronto	15 Dec.	15 Jan.	Engineers Association
PROJECT PLANNING (40)					
WASTE DISPOSAL SEMINAR (50)	15-17 Oct. 75	Thunder Bay	15 July	15 Aug.	
	28-30 Oct. 75	Toronto	15 July	15 Aug.	MOE only
	12-14 Nov. 75	Sudbury	15 Aug.	15 Sep.	
	2- 4 Mar. 76	London	15 Dec.	15 Jan.	
	16-18 Mar. 76	Toronto	15 Dec.	15 Jan.	
	30 Mar-1 Apr/76	Kingston	15 Dec.	15 Jan.	
CONTINGENCY PLANNING SEMINAR (50)	21-22 Oct. 75	Toronto	15 July	15 Aug.	MOE only
ICE SHELTER INSPECTION SEMINAR (50)	15-17 Oct. 75	To be determined	15 July	15 Aug.	MOE only
BOATING AND MARINA INSPECTION	6- 8 Apr. 76	Toronto	15 Dec.	15 Jan.	MOE only
SEMINAR (50)					

TRAINING, CERTIFICATION & SAFETY
CALENDAR 1975-76

A P R I L	MON	TUES	WED	THURS
		1	2	3
	7	8	9	10
	14	15	16	17
1975 M A Y				
	21	22	23	24
	28	29	30	1
				2
				(Toronto)
← Maintenance gas Fitters →				
1975 M A Y	5	6	7	8
				9
				(Toronto)
				(Toronto)
	12	13	14	15
				16
← Visible Emissions →				
1975 M A Y	19	20	21	22
	26	27	28	29
				30

TRAINING, CERTIFICATION & SAFETY
CALENDAR 1975-76

MON	TUES	WED	THURS	FRI
2 ←	3	4 ACOUSTICS 1	5	6 (Toronto) →
9	10	11	12	13
16	17	18	19	20
23 ←	24	25 ACOUSTICS 1	26	27 (Toronto) →
30	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30	31	1

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TRAINING, CERTIFICATION & SAFETY CALENDAR 1975-76

	MON	TUES	WED	THURS	FRI
A U G U S T	4	5	6	7	8
	11	12	13	14	15
	18	19	20	21	22
	25	26	27	28	29
1975 S E P T E M B E R	1	2	3	4	5
	8 ←	9	10 ACOUSTICS 2	11	12 (Toronto) →
	15	16	17	18	19
	22 ←	23	24 ACOUSTICS 2	25	26 (Toronto) →
	29	30			

TRAINING, CERTIFICATION & SAFETY CALENDAR 1975-76

	MON	TUES	WED	THURS	FRI
O C T O B E R			1	2	3 (Toronto) →
	←	BASIC WATER/SEWAGE TREATMENT			(Toronto) →
	←	SEWER AND WATERMAIN DESIGN			
	6	7	8	9	10 (Toronto) →
	←	INDUSTRIAL ABATEMENT PART I			(Toronto) →
	←	ACTIVATED SLUDGE WORKSHOP			(Northwestern Region) →
	←	SAFETY TRAINING			
	13	14	15	16	17 (Thunder Bay) →
		←	BASIC GAS CHLORINATION WKSP.		(Thunder Bay) →
			← WASTE DISPOSAL		(Barrie) →
			← ICE SHELTER SEMINAR		
	20	21	22	23	24 (Toronto) →
1975 N O V E M B E R	←	BASIC SEWAGE TREATMENT			(Northeastern Region) →
	←	SAFETY TRAINING			(Toronto) →
		← CONTINGENCY PLANNING →			
	27	28	29	30	31 (Toronto) →
	←	BASIC WATER TREATMENT			(Toronto) →
		← WASTE DISPOSAL			(Toronto) →
	←	ACOUSTICS 3			
	3	4	5	6	7 (Toronto) →
	←	SURFACE WATER TREATMENT			(Toronto) →
	←	MAINTENANCE GAS FITTERS			(Toronto) →
	←	INDUSTRIAL ABATEMENT PART II			
	10	11	12	13	14 (Sudbury) →
			← WASTE DISPOSAL		
	17	18	19	20	21 (Toronto) →
	←	CONTROL OF INDUSTRIAL WASTES IN MUNICIPALITIES			(Sudbury) →
		← BASIC GAS CHLORINATION WKSP.			(Toronto) →
	←	BASIC WATER/SEWAGE TREATMENT			
	24	25	26	27	28 (Toronto) →
	←	ACOUSTICS 4			(Toronto) →
	←	ACTIVATED SLUDGE WORKSHOP			(Southwestern Region) →
	←	SAFETY TRAINING			

TRAINING, CERTIFICATION & SAFETY CALENDAR 1975-76

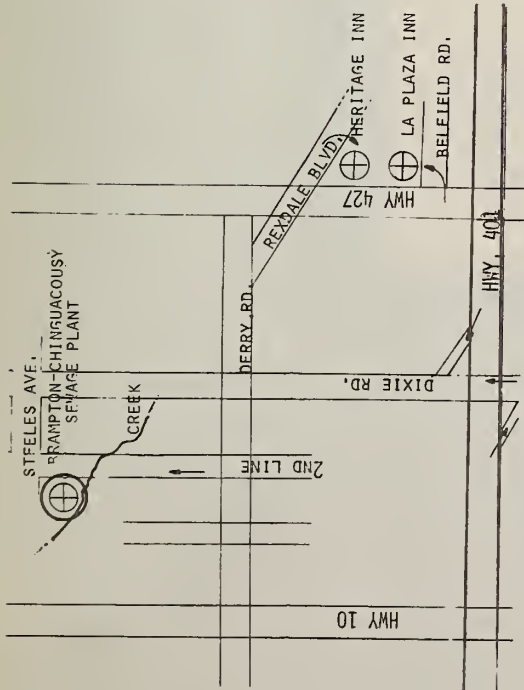
MON	TUES	WED	THURS	FRI
1 ←	2 ←	3 ←	4 ←	5 (Toronto) →
←	←	←	←	←
8 ←	9 ←	10 ←	11 ←	12 (Toronto) →
←	←	←	←	←
15 ←	16 ←	17 ←	18 ←	19 (Toronto) →
←	←	←	←	←
22	23	24	25	26
29	30	31	1	2
5 ←	6 ←	7 ←	8 ←	9 (Sudbury) →
←	←	←	←	←
12 ←	13 ←	14 ←	15 ←	16 (Toronto) →
←	←	←	←	←
←	←	←	←	←
19 ←	20 ←	21 ←	22 ←	23 (Toronto) →
←	←	←	←	←
←	←	←	←	←
26 ←	27 ←	28 ←	29 ←	30 (Toronto) →
←	←	←	←	←

TRAINING, CERTIFICATION & SAFETY
CALENDAR 1975-76

	MON	TUES	WED	THURS	FRI
F E B U A R Y	2 ←	3 ←	4 ←	5 ←	6 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	9 ←	10 ←	11 ←	12 ←	13 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	16 ←	17 ←	18 ←	19 ←	20 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←
1976 M A R C H	1 ←	2 ←	3 ←	4 ←	5 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←
	8 ←	9 ←	10 ←	11 ←	12 (Kingston) →
	←	←	←	←	←
	←	←	←	←	←
	15 ←	16 ←	17 ←	18 ←	19 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	22 ←	23 ←	24 ←	25 ←	26 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←
	29 ←	30 ←	31 ←	1 ←	2 (Toronto) →
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←
	←	←	←	←	←

TRAINING, CERTIFICATION & SAFETY CALENDAR 1975-76

	MON	TUES	WED	THURS	FRI
A P R I L	5 ←	6 INDUSTRIAL	7 ABATEMENT	8 PART III	9 (Toronto) →
	12 ←	13	14 ACOUSTICS 5	15 (Toronto)	16 (Toronto) →
		BOATING AND ←	MARINA SEMINAR →		
	19	20	21	22	23
1976	26	27	28	29	30
M A Y	3	4	5	6	7
	10	11	12	13	14
	17	18	19	20	21
	24	25	26	27	28
	31 /	1	2	3	4



BRAMPTON-CHINGUACOUSY

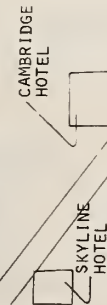
SEWAGE PLANT

ARRIVING FROM THE WEST

Turn off Hwy. 401 at interchange 46, Dixon Rd. - TURN RIGHT and go east on Dixon Rd. approx. 1 mile to Islington Ave. - turn LEFT and go north approx. 1 mile - turn off at exit for Hwy 401 East - KEEP TO THE RIGHT and turn off at first road to the right - turn LEFT at Resources Rd. and continue to Lab.

TO AIRPORT

OTHER HOTELS



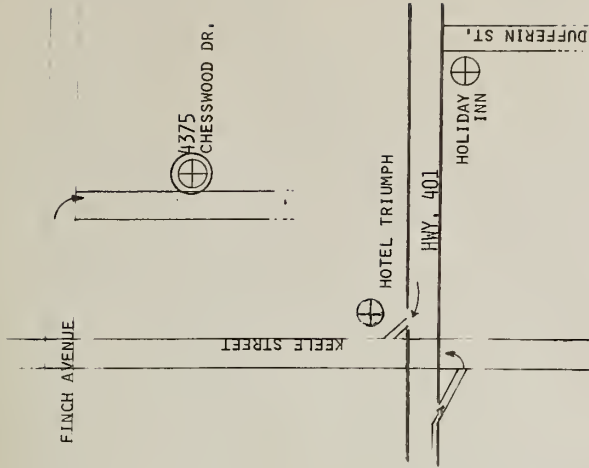
ARRIVING FROM THE SOUTH

Turn RIGHT off Islington Ave. at exit for Hwy 401. From the exit, THE RIGHT and turn off at first road to the right - turn left at Resources Rd. and continue to Lab.

MINISTRY OF THE ENVIRONMENT

TRAINING, CERTIFICATION AND SAFETY SECTION

LOCATION OF FACILITIES AND NEARBY ACCOMMODATIONS



4375 CHESSWOOD DR.

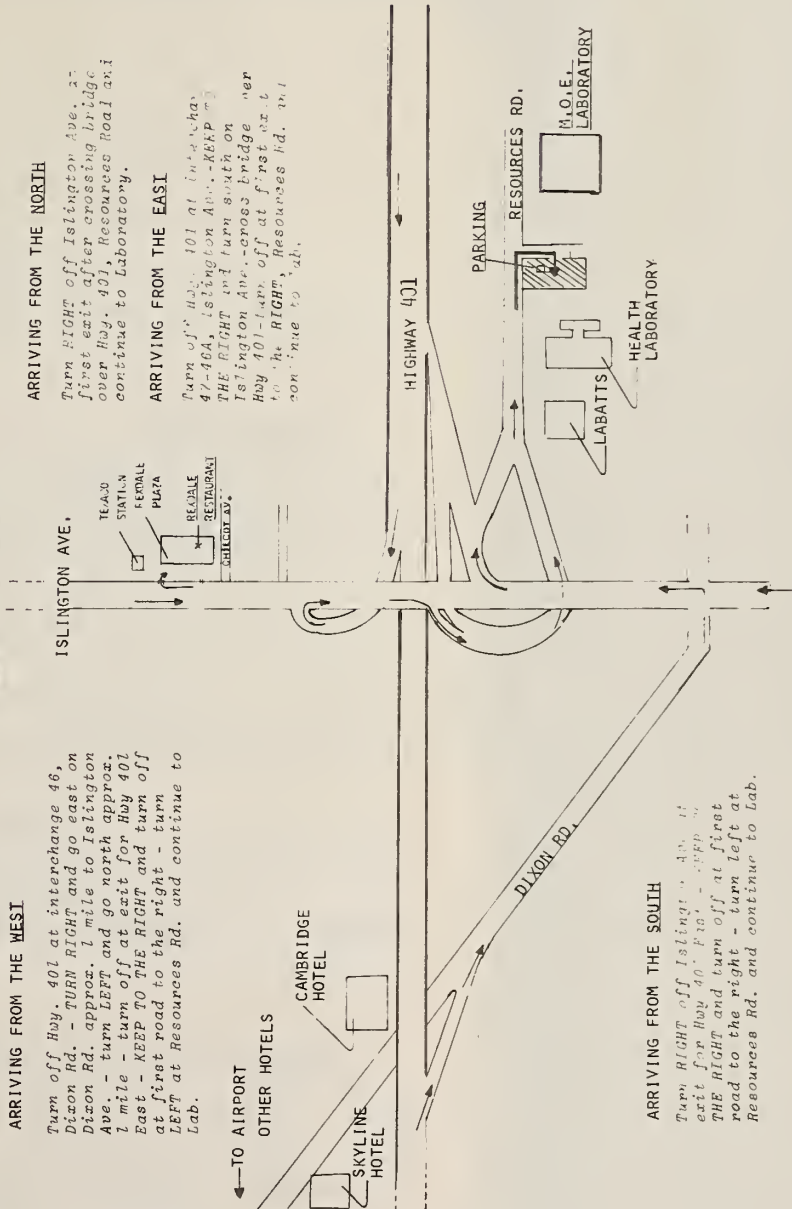
LABORATORY

ARRIVING FROM THE NORTH

Turn RIGHT off Islington Ave. at first exit after crossing bridge over Hwy. 401, Resources Rd. and continue to Laboratory.

ARRIVING FROM THE EAST

Turn off Hwy. 401 at interchange 47-46A, Islington Ave. - KEEP TO THE RIGHT and turn south on Islington Ave. - cross bridge over Hwy 401 - turn off at first exit to the RIGHT, Resources Rd. and continue to Lab.



NOT TO SCALE

ONTARIO. MINISTRY OF THE
ENVIRONMENT. TECHNICAL SERVICES...

INFORMATION ON COURSES, WORKSHOPS
AND SEMINARS.

MOE/INF/AQUJ

1975-1976

44p.

DATE	ISSUED TO

MOE/INF/AQUJ

Ontario Ministry of the En
Information on

courses workshops & aquj

c.1 a aa



Environment Ontario

Laboratory Library

125 Resources Rd.

Etobicoke, Ontario M9P 3V6

Canada

